What Is Claimed Is:

1. An actively-controlled sound absorption panel system using a movement-controlled reflective plate comprising:

a sound absorption panel section in which a sound absorption space is formed by a surface plate made of a perforated plate, side plates with porous sound absorption material stuck thereon, and a back sheet plate with porous sound absorption material stuck thereon, and a movement-controlled reflective plate is provided in said sound absorption space such that said movement-controlled reflective plate is slightly smaller than said perforated plate, having a porous sound absorption material stuck onto the inside wall face thereof, and is capable of controlling movement and rotation with respect to said perforated plate; and

an active sound absorption control system section having a sensing sensor and an error sensor arranged facing the noise field on either side of said sound absorption panel section, a signal processor that performs processing such that the difference of the overall sound pressure levels measured by said two sensors is a maximum and that outputs a control signal relating to the mode and position of said reflective

plate, and a movement-controlled reflective plate drive control motor driven by the control signal from this signal processor;

wherein provision is made such that noise in a wide frequency range can be actively absorbed in an optimal fashion, by controlling the mode and position of said movement-controlled reflective plate in response to change of the noise source character.

2. The actively-controlled sound absorption panel system according to claim 1, wherein said movement-controlled reflective plate is arranged to be capable of drive control so as to make possible composite movement including three-dimensional positional displacement such as parallel displacement, forwards/rearwards tilting, side tilting and rotation, and three-dimensional movement such as curved movement, rotation and rocking.

3. The actively-controlled sound absorption panel system according to claim 2, wherein the whole of said panel sound absorption section is formed by a duct or sector of arbitrary shaped cross section such as circular, rectangular or elliptical, a plurality of active sound absorption panel sections are arranged by partitioning said duct or sector into a plurality of active control panel sections, and provision is made such that three-dimensional displacement drive control of said

movement-controlled reflective plate can be achieved at each actively-controlled panel section.

4. The actively-controlled sound absorption panel system according to claim 1, 2 or 3, wherein said active sound absorption control system is a system for noise reduction of an aircraft engine and said sound absorption space is formed in the space between the inner and outer walls of the nacelle constituting the intake/exhaust duct of the engine.

5. The actively-controlled sound absorption panel system according to claim 1, 2 or 3, wherein said surface plate comprises said perforated plate, and multi-layer metallic wire mesh and/or multi-layer porous sound absorption material stuck onto said perforated plate.

6. The actively-controlled sound absorption panel system according to claim 1, 2 or 3, wherein the structural members and sound absorption materials of said sound absorption panel section are formed by a heat-resistant material and/or material for high pressure and high temperature use, so as to achieve duct liner of turbine noise and acoustically lined ejector of jet noise.

7. The actively-controlled sound absorption panel system according to claim 1, 2 or 3, wherein said movement-controlled reflective plate is of arbitrary shape such as a flat plate, semi-elliptical, semi-

cylindrical, hemispherical, or corrugated, or a shape obtained by superimposition of these.

8. The actively-controlled sound absorption panel system according to claim 1, 2 or 3, wherein said signal processor outputs a control signal relating to mode and position of said movement-controlled reflective plate processed by a least mean square algorithm such that the difference of the overall sound pressure levels measured by the sensing sensor arranged immediately in front of the fan and by the error sensor arranged upstream thereof is a maximum.

9. The actively-controlled sound absorption panel system according to claim 8, wherein a data bank, in which is in advance compiled and stored information regarding the amount of sound absorption performance of said sound absorption panel section, using the mode and positional displacement of the movement-controlled reflective plate as parameters, is utilized in said least mean square algorithm processing.

10. The actively-controlled sound absorption panel system according to claim 1, 2 or 3, wherein drive of the three-dimensional movement and rotation of said movement-controlled reflective plate is performed by a motor drive mechanism, hydraulic or air-pressurized drive mechanism or wire-wheel drive mechanism.